



## SEQUENCE LISTING

<110> Murdin, Andrew D  
Dunn, Pamela L

<120> IMMUNOGENIC COMPOSITIONS FOR PROTECTION AGAINST  
CHLAMYDIAL INFECTION

<130> 1038-971 MIS:jb

<140> 09/391,606

<141> 1999-09-07

<160> 20

<170> PatentIn Ver. 2.1

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<212> DNA

<213> Chlamydia pneumoniae

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&lt;212&gt; DNA

&lt;213&gt; Chlamydia pneumoniae

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&lt;213&gt; Chlamydia pneumoniae

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 <213> *Chlamydia pneumoniae*

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&lt;211&gt; 490

&lt;212&gt; PRT

&lt;213&gt; Chlamydia pneumoniae

&lt;400&gt; 8

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Glu Ser Lys Thr Asp Ser Val Glu Arg Trp Ser Ile Leu Arg Ser Ala  
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 85 90 95  
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 Lys Leu Thr Ser Phe Asp Leu Leu Gln Thr Ala Leu Leu Gln Ser Val  
 195 200 205  
 Ala Asn Asn Asn Lys Ala Ala Glu Leu Leu Lys Glu Met Gln Asp Asn  
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 Pro Val Val Pro Gly Lys Thr Pro Ala Ile Ala Gln Ser Leu Val Asp  
 225 230 235 240  
 Gln Thr Asp Ala Thr Ala Thr Gln Ile Glu Lys Asp Gly Asn Ala Ile  
 245 250 255  
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Ser Ile Leu Met Ser Gly Phe Arg Gln Met Ile His Met Phe Asn Thr  
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Glu Asn Pro Asp Ser Gln Ala Ala Gln Gln Glu Leu Ala Ala Gln Ala  
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Gln Gly Ile Leu Asn Ala Leu Gly Gln Ile Ala Ser Ala Ala Val Val  
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<211> 463

<212> PRT

<213> Chlamydia pneumoniae

<400> 9

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Asn Ser Ser Ser Ser Thr Ser Arg Ser Ala Asp Val Asp Ser Thr Thr  
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Ala Thr Ala Pro Thr Pro Pro Pro Pro Thr Ser Asp Asp Tyr Lys Thr  
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Gln Ala Gln Thr Ala Tyr Asp Thr Ile Phe Thr Ser Thr Ser Leu Ala  
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Asp Ile Gln Ala Ala Leu Val Ser Leu Gln Asp Ala Val Thr Asn Ile  
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 Gly Asp Ala Tyr Phe Ala Gly Gln Asn Ala Ser Gly Ala Val Glu Asn  
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 Ala Lys Ser Asn Asn Ser Ile Ser Asn Ile Asp Ser Ala Lys Ala Ala  
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 <213> Chlamydia pneumoniae

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&lt;212&gt; DNA

&lt;213&gt; Chlamydia pneumoniae

&lt;400&gt; 13

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 atcaattatc atgaatggca agtaggagcc tctctatctt acagactaaa ctcttttagt 780  
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 cagccaaaac tacctacagc tgttttaaac ttaactgcat ggaacccttc tttactagga 900  
 aatgccacag cattgtctac tactgattcg ttctcagact tcatgcaaat tgtttcctgt 960  
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 agcttaagtt taaaccgctg atcagcctcg actgtgcctt ctagttgcca gccatctggt 1260  
 gtttgcctcc ccccgctgcc ttccttgacc ctggaagggt c 1301

&lt;210&gt; 14

&lt;211&gt; 1101

&lt;212&gt; DNA

&lt;213&gt; Chlamydia pneumoniae

&lt;400&gt; 14

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 tacacagaca cctctttctc ttggagcgta ggcgctcggt gagccttatg ggaatgcggg 540  
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&lt;210&gt; 15

&lt;211&gt; 394

&lt;212&gt; PRT

&lt;213&gt; Chlamydia pneumoniae

&lt;400&gt; 15

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 Thr Ile Trp Glu Gly Ala Ala Gly Asp Pro Cys Asp Pro Cys Ala Thr  
 20 25 30  
 Trp Cys Asp Ala Ile Ser Leu Arg Ala Gly Phe Tyr Gly Asp Tyr Val  
 35 40 45  
 Phe Asp Arg Ile Leu Lys Val Asp Ala Pro Lys Thr Phe Ser Met Gly  
 50 55 60  
 Ala Lys Pro Thr Gly Ser Ala Ala Ala Asn Tyr Thr Thr Ala Val Asp  
 65 70 75 80  
 Arg Pro Asn Pro Ala Tyr Asn Lys His Leu His Asp Ala Glu Trp Phe  
 85 90 95  
 Thr Asn Ala Gly Phe Ile Ala Leu Asn Ile Trp Asp Arg Phe Asp Val  
 100 105 110  
 Phe Cys Thr Leu Gly Ala Ser Asn Gly Tyr Ile Arg Gly Asn Ser Thr  
 115 120 125  
 Ala Phe Asn Leu Val Gly Leu Phe Gly Val Lys Gly Thr Thr Val Asn  
 130 135 140  
 Ala Asn Glu Leu Pro Asn Val Ser Leu Ser Asn Gly Val Val Glu Leu  
 145 150 155 160  
 Tyr Thr Asp Thr Ser Phe Ser Trp Ser Val Gly Ala Arg Gly Ala Leu  
 165 170 175  
 Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Glu Phe Gln Tyr Ala Gln  
 180 185 190  
 Ser Lys Pro Lys Val Glu Glu Leu Asn Val Ile Cys Asn Val Ser Gln  
 195 200 205  
 Phe Ser Val Asn Lys Pro Lys Gly Tyr Lys Gly Val Ala Phe Pro Leu  
 210 215 220  
 Pro Thr Asp Ala Gly Val Ala Thr Ala Thr Gly Thr Lys Ser Ala Thr  
 225 230 235 240  
 Ile Asn Tyr His Glu Trp Gln Val Gly Ala Ser Leu Ser Tyr Arg Leu  
 245 250 255  
 Asn Ser Leu Val Pro Tyr Ile Gly Val Gln Trp Ser Arg Ala Thr Phe  
 260 265 270  
 Asp Ala Asp Asn Ile Arg Ile Ala Gln Pro Lys Leu Pro Thr Ala Val  
 275 280 285  
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 290 295 300

Leu Ser Thr Thr Asp Ser Phe Ser Asp Phe Met Gln Ile Val Ser Cys  
 305 310 315 320  
 Gln Ile Asn Lys Phe Lys Ser Arg Lys Ala Cys Gly Val Thr Val Gly  
 325 330 335  
 Ala Thr Leu Val Asp Ala Asp Lys Trp Ser Leu Thr Ala Glu Ala Arg  
 340 345 350  
 Leu Ile Asn Glu Arg Ala Ala His Val Ser Gly Gln Phe Arg Phe Arg  
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 Tyr Gln Ala Tyr Val Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn  
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 Ser Ala Val Asp His His His His His His  
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<210> 16  
 <211> 367  
 <212> PRT  
 <213> Chlamydia pneumoniae

<400> 16  
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 35 40 45  
 Phe Asp Arg Ile Leu Lys Val Asp Ala Pro Lys Thr Phe Ser Met Gly  
 50 55 60  
 Ala Lys Pro Thr Gly Ser Ala Ala Ala Asn Tyr Thr Thr Ala Val Asp  
 65 70 75 80  
 Arg Pro Asn Pro Ala Tyr Asn Lys His Leu His Asp Ala Glu Trp Phe  
 85 90 95  
 Thr Asn Ala Gly Phe Ile Ala Leu Asn Ile Trp Asp Arg Phe Asp Val  
 100 105 110  
 Phe Cys Thr Leu Gly Ala Ser Asn Gly Tyr Ile Arg Gly Asn Ser Thr  
 115 120 125  
 Ala Phe Asn Leu Val Gly Leu Phe Gly Val Lys Gly Thr Thr Val Asn  
 130 135 140  
 Ala Asn Glu Leu Pro Asn Val Ser Leu Ser Asn Gly Val Val Glu Leu  
 145 150 155 160  
 Tyr Thr Asp Thr Ser Phe Ser Trp Ser Val Gly Ala Arg Gly Ala Leu  
 165 170 175

Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Glu Phe Gln Tyr Ala Gln  
 180 185 190

Ser Lys Pro Lys Val Glu Glu Leu Asn Val Ile Cys Asn Val Ser Gln  
 195 200 205

Phe Ser Val Asn Lys Pro Lys Gly Tyr Lys Gly Val Ala Phe Pro Leu  
 210 215 220

Pro Thr Asp Ala Gly Val Ala Thr Ala Thr Gly Thr Lys Ser Ala Thr  
 225 230 235 240

Ile Asn Tyr His Glu Trp Gln Val Gly Ala Ser Leu Ser Tyr Arg Leu  
 245 250 255

Asn Ser Leu Val Pro Tyr Ile Gly Val Gln Trp Ser Arg Ala Thr Phe  
 260 265 270

Asp Ala Asp Asn Ile Arg Ile Ala Gln Pro Lys Leu Pro Thr Ala Val  
 275 280 285

Leu Asn Leu Thr Ala Trp Asn Pro Ser Leu Leu Gly Asn Ala Thr Ala  
 290 295 300

Leu Ser Thr Thr Asp Ser Phe Ser Asp Phe Met Gln Ile Val Ser Cys  
 305 310 315 320

Gln Ile Asn Lys Phe Lys Ser Arg Lys Ala Cys Gly Val Thr Val Gly  
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Ala Thr Leu Val Asp Ala Asp Lys Trp Ser Leu Thr Ala Glu Ala Arg  
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Leu Ile Asn Glu Arg Ala Ala His Val Ser Gly Gln Phe Arg Phe  
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<211> 38

<212> DNA

<213> Chlamydia pneumoniae

<400> 17

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38

<210> 18

<211> 28

<212> DNA

<213> Chlamydia pneumoniae

<400> 18

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<211> 38

<212> DNA

<213> Chlamydia pneumoniae

<400> 19  
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38

<210> 20  
<211> 31  
<212> DNA  
<213> Chlamydia pneumoniae

<400> 20  
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31

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